

# International Lexile® Study

## Impact of *Achieve3000 Literacy*™ Usage on Student Reading Growth

*By Steve Tardrew, Vice President of Assessment and Research, and Dr. Greg Gunn, Psychometrician*

### Foreword

We are excited to share the results of this year's International Lexile Study with all of you. For the past 21 years, *Achieve3000 Literacy* has been creating and providing better ways to leverage technology to increase engagement and motivation while accelerating reading growth for students across the globe. Our International Lexile Study is a snapshot of our results from the 2020–2021 school year and an indicator of the importance of our partnerships in a year that presented many challenges and opportunities.

*Achieve3000 Literacy* is a transformative solution designed to elevate mindsets and skill sets. It engages multiple stakeholders through culturally relevant content, actionable data, professional learning sessions, and wraparound support services. Our relationships extend beyond schools and classrooms into our communities through celebrations, books and school supply donations, natural disaster relief, and cultural responsiveness. We believe equity starts with our schools and their communities by celebrating our diverse cultures, languages, and experiences.

We have been supporting international students, teachers, parents, and academic institutions for the past nine years through partnerships that include PreK to Grade 12 schools and districts (public along with private and religious),

#### STUDY SAMPLE



**Countries:**

39 worldwide

**Students:**

70,674

**Grades:**

2–12

Departments of Education, Ministries of Education, universities, and private language schools. We value these partnerships and appreciate the ongoing opportunities to collaborate and learn more about every community we serve.

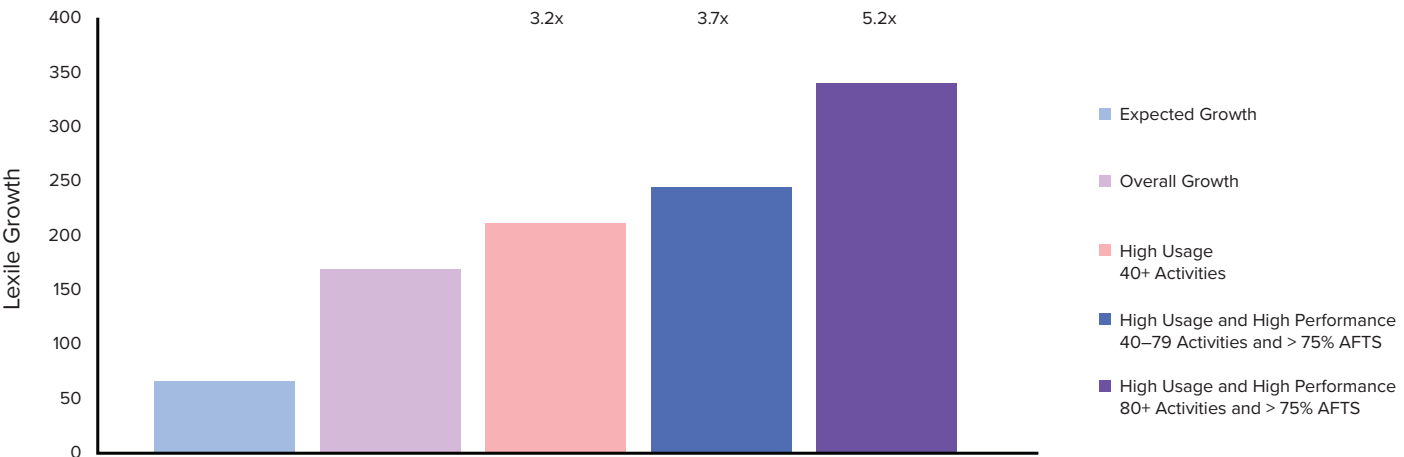
Globally, our focus has always been on providing students with the tools and resources they need. Equitable access is key, along with content, services, and data that promote cultural relevance and respect. These unprecedented times will continue to challenge everyone in education to think flexibly, use data wisely, promote evidence-based practices, and create instructional continuity. By doing so, we model for our students and families the importance of resilience, collaboration, and celebration in the face of adversity.

Wherever students are learning and educators are teaching, literacy matters. Our partners around the globe are always looking for new and better ways to promote equity, increase engagement, accelerate reading gains, and improve English proficiency. That’s why this International Lexile® Study is so important. The only way to know if a learning solution is actually doing what it’s supposed to be doing is with research. We conduct efficacy studies like this one every year because we want to be able to provide our partners with proof. And what we’ve found, year after year, is that *Achieve3000 Literacy™* works.

## Executive Summary

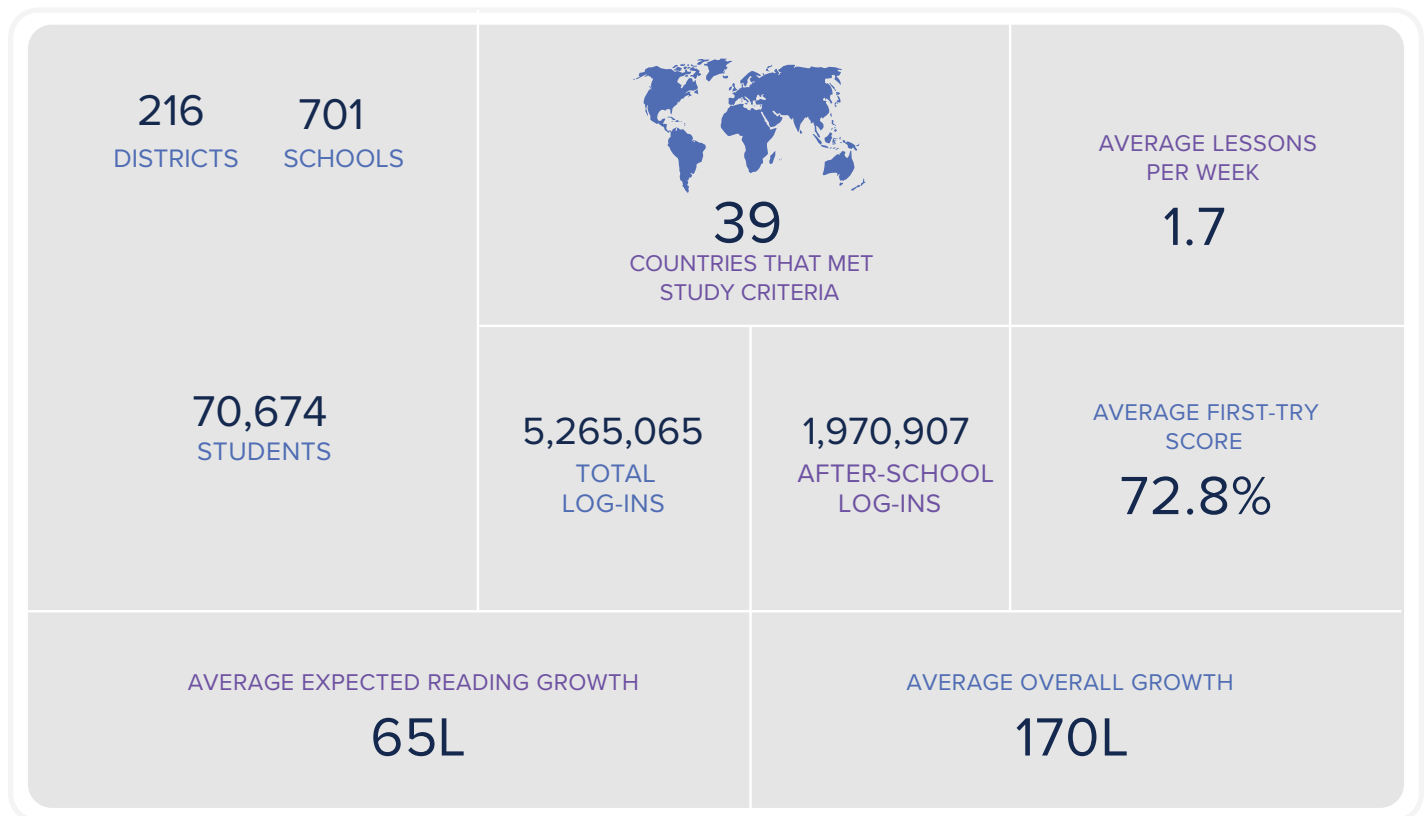
This report is a continuation of the annual summative analysis exploring the impact of *Achieve3000 Literacy* usage on Lexile growth and acceleration for international users.

- On average, highly engaged students achieved 5.2 times their expected reading growth. All students on average gained 170L, which was 105L higher than their expected growth of 65L. However, reading growth increased to as high as 340L for more engaged students.



- Highly engaged learners in specific student population groups attained at least four times their expected reading growth. Educators and families of students in need of additional supports were especially concerned about the impact of COVID-19 over the last year on their students. However, highly engaged, below-grade-level readers demonstrated five times expected growth, and students falling far below university and career readiness standards achieved 4.4 times expected growth.
- The percentage of students who were on track for university and career readiness increased from 17% to 34%. Reading proficiency is one of the strongest indicators of success after secondary school. Using grade-level benchmarks developed by MetaMetrics®, Achieve3000 Literacy™ provides educators with insight into how many of their students are progressing at a rate that puts them “on track” to reach university-level reading proficiency by the end of Grade 12 (1,300L).

### About the 2020–2021 Study



# Methodology

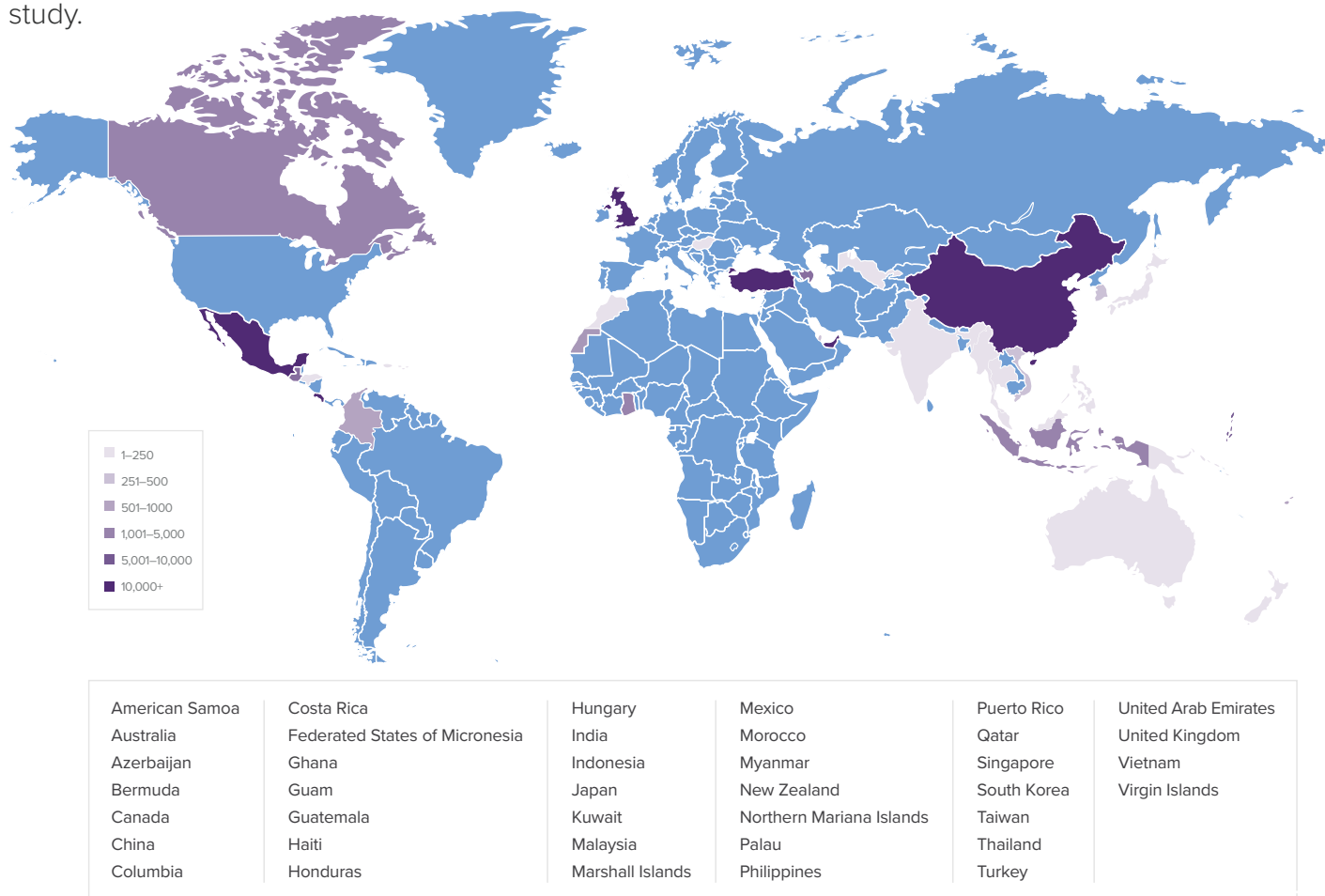
## Sample Criteria and Description

The sample in this report includes students learning English as a new language who were enrolled in Grades 2 through 12 during the 2020–2021 school year and university students studying English as a foreign language. The data includes English-only program usage and performance data. All students included in the study met the following criteria:

- Had a pretest LevelSet Lexile® reading measure.
- Had an end-of-year Lexile measure.
- Completed one or more multiple-choice assessments.
- Did not receive any manual Lexile adjustments.
- Had at least 150 days between the pretest LevelSet Lexile measure and the end-of-year Lexile measure.

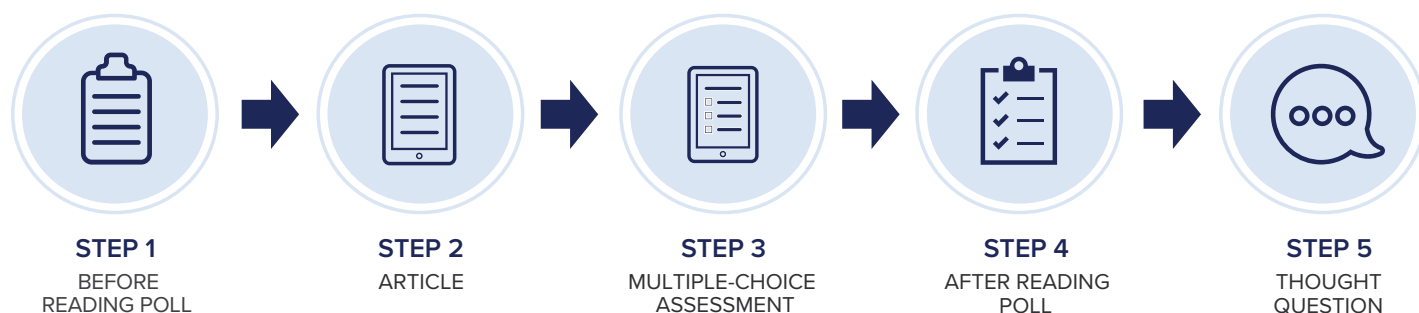
## Geographic Distribution of Students in Sample

Students from 43 countries in total use *Achieve3000 Literacy*™. The following numbers, and those in the infographic on page 5, represent only those students who met the criteria to be included in this study.



## Analysis

First, a descriptive analysis of the overall student sample was completed, and two-tailed t-tests were conducted to determine the statistical significance of the differences between beginning-of-year and end-of-year Lexile® measures and between actual and expected reading growth. Statistical significance is defined as a p-value of less than .05, indicating a 95% level of confidence that the results found did not occur by chance. Afterwards, the impact of a variety of factors on students' reading growth and rate of acceleration were examined, including by grade and school level, by below-grade-level readers, by advanced readers, and by university and career-readiness proficiency levels.



## Implementation Categories

In addition to comparing expected growth to the overall sample's actual reading growth, this study also examines reading growth according to implementation models with a minimum level of usage and performance, according to the number of lessons and the average score students attain on embedded assessments. Many of the lessons in *Achieve3000 Literacy*™ include an embedded assessment (Step 3). Note that students must complete the assessment for the lesson to be counted. Completing one assessment per week is considered a high level of usage; two per week is considered an optimal level of usage. Also note that students' performance on these assessments is used to determine the just-right text, differentiated at one of 12 Lexile levels in English and eight in Spanish, for each student. When the average first-try score (AFTS) is 75% or higher, it is an indication that the texts students read were properly targeted to their individual reading level and that their comprehension of the texts was optimal for growth in reading ability.

To examine the impact of high usage and performance, or high engagement, on reading growth, sub-analyses were conducted for students who were on track to complete:

- 40+ lessons in a year.
- 40–79 lessons with a 75% AFTS.
- 80+ lessons with a 75% AFTS.

## Reporting Category Key

- **Highest Usage and Performance**  
AFTS greater than or equal to 75% and on track to complete 80 lessons in a year (2+ lessons per week)
- **High Usage and Performance**  
AFTS greater than or equal to 75% and on track to complete 40–79 lessons in a year (1–2 lessons per week)
- **High Usage**  
40+ lessons in a year (1+ lessons per week)
- **Overall Growth**
- **Expected Growth**

## Beginning-of-Year Versus End-of-Year Reading Levels

Consistent with a trajectory of growth, Graph 1 shows that students' Lexile® measures were higher at the end of the year than at the beginning of the year, and this was true for both the overall sample and within each grade level.

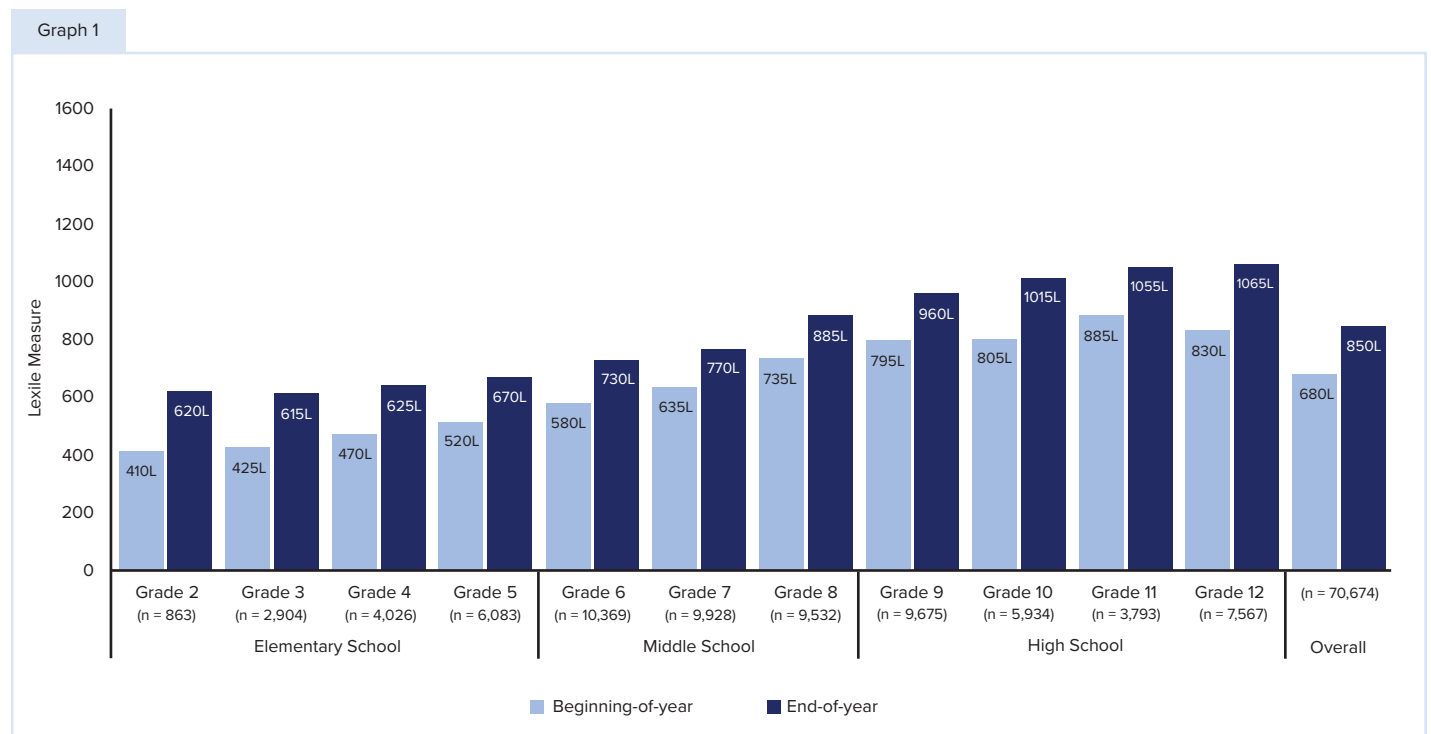


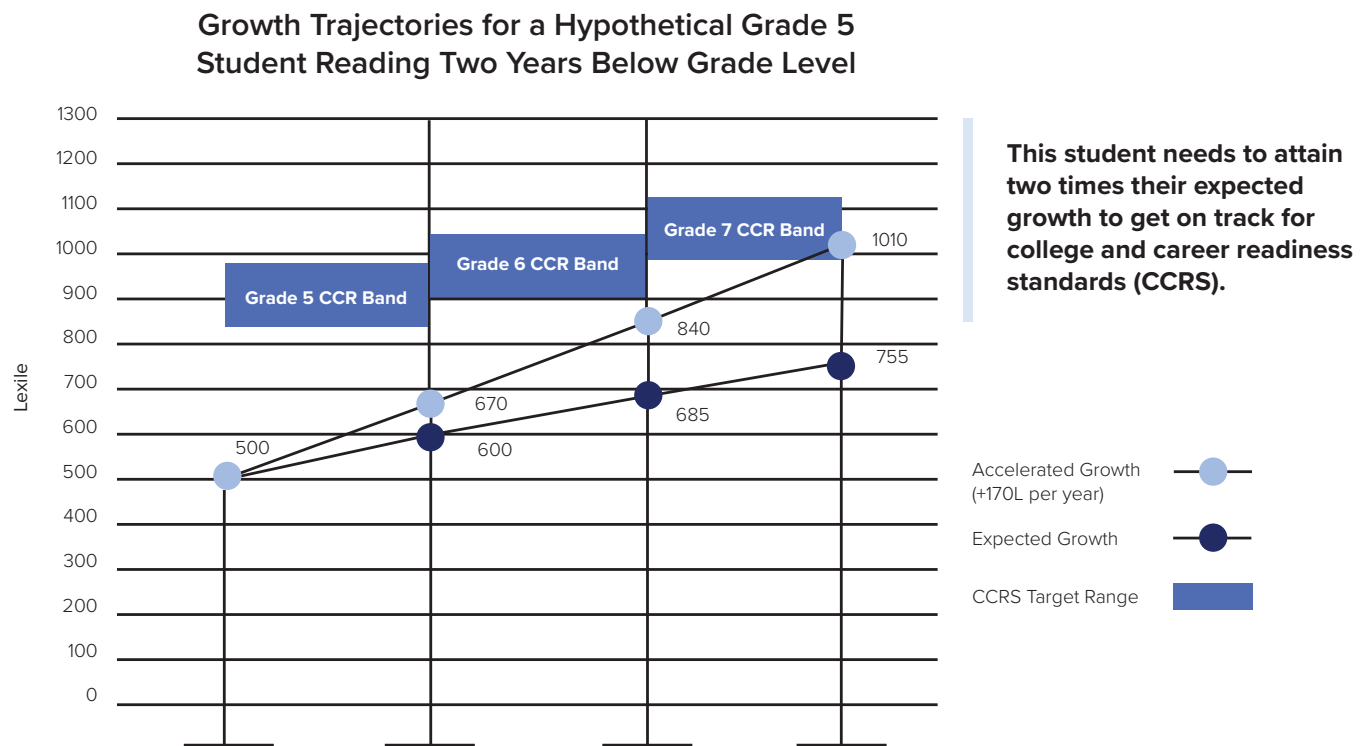
Table 1

Grade Level	2	3	4	5	6	7	8	9	10	11	12	OVERALL
Beginning-of-Year	410	425	470	520	580	635	735	795	805	885	830	680
End-of-Year	620	615	640	670	730	770	885	960	1015	1055	1065	850
n	863	2,904	4,026	6,083	10,369	9,928	9,532	9,675	5,934	3,793	7,567	70,674

Note: Overall and within each grade, end-of-year Lexile® measures (ranging from 615L to 1065L) were greater than beginning-of-year Lexile measures (ranging from 410L to 885L), and these differences were all statistically significant,  $t > 14.76$ ,  $p < 0.001$ .

## Reading Growth and Rates of Acceleration

Several reports inside the Teacher Edition of *Achieve3000 Literacy*™ refer to students' overall and expected Lexile growth. Expected growth is based on the MetaMetrics® proprietary formula (MetaMetrics, 2004), which considers the student's initial Lexile measure and the length of time from the student's beginning-of-year measure to the end-of-year measure. Overall growth is calculated by subtracting the student's beginning-of-year Lexile measure from her current or end-of-year Lexile measure. Accelerated growth is any growth above a student's expected growth. *Achieve3000 Literacy* is especially committed to making accelerated literacy growth possible for more students, especially below-grade-level readers. When we consider shifts in Lexile growth, it is important to remember that students who are performing below grade level often need to double or triple their expected growth over the course of two to three years in order to achieve university and career readiness by secondary school graduation.



# Students achieved accelerated reading growth, both overall and at every grade level.

As can be seen in Graph 2, overall reading growth exceeded expected growth, and this was true for both the overall sample and within each grade level. Of note, although acceleration occurred within each grade, the greatest rate of acceleration occurred in Grades 9 to 12.

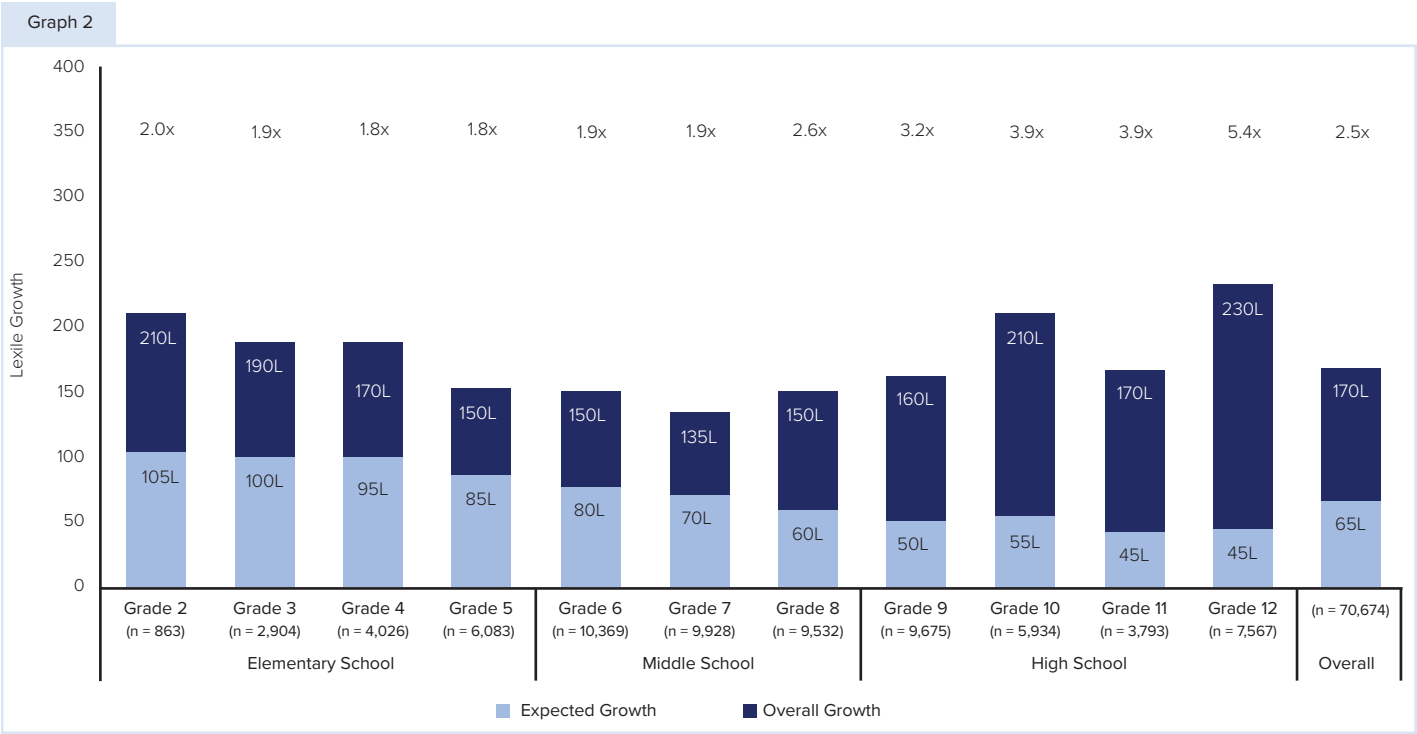


Table 2

Grade Level	2	3	4	5	6	7	8	9	10	11	12	OVERALL
Beginning-of-Year	105	100	95	85	80	70	60	50	55	45	45	65
End-of-Year	210	190	170	150	150	135	150	160	210	170	230	170
Acceleration	2.0	1.9	1.8	1.8	1.9	1.9	2.6	3.2	3.9	3.9	5.4	2.5
n	863	2,904	4,026	6,083	10,369	9,928	9,532	9,675	5,934	3,793	7,567	70,674

Note: Overall and within each grade, overall growth (ranging from 135L to 230L) was greater than expected growth (ranging from 45L to 105L), and these differences were all statistically significant,  $t > 18.39$ ,  $p < 0.001$ .



## Acceleration by Usage and Performance

**Students who were on track to complete 40+ lessons achieved 2.5 times or more than their expected Lexile® growth.**

As shown in Graph 3, Lexile growth increased as the number of activities completed increased. Clearly, when students engage in learning, they make reading progress.

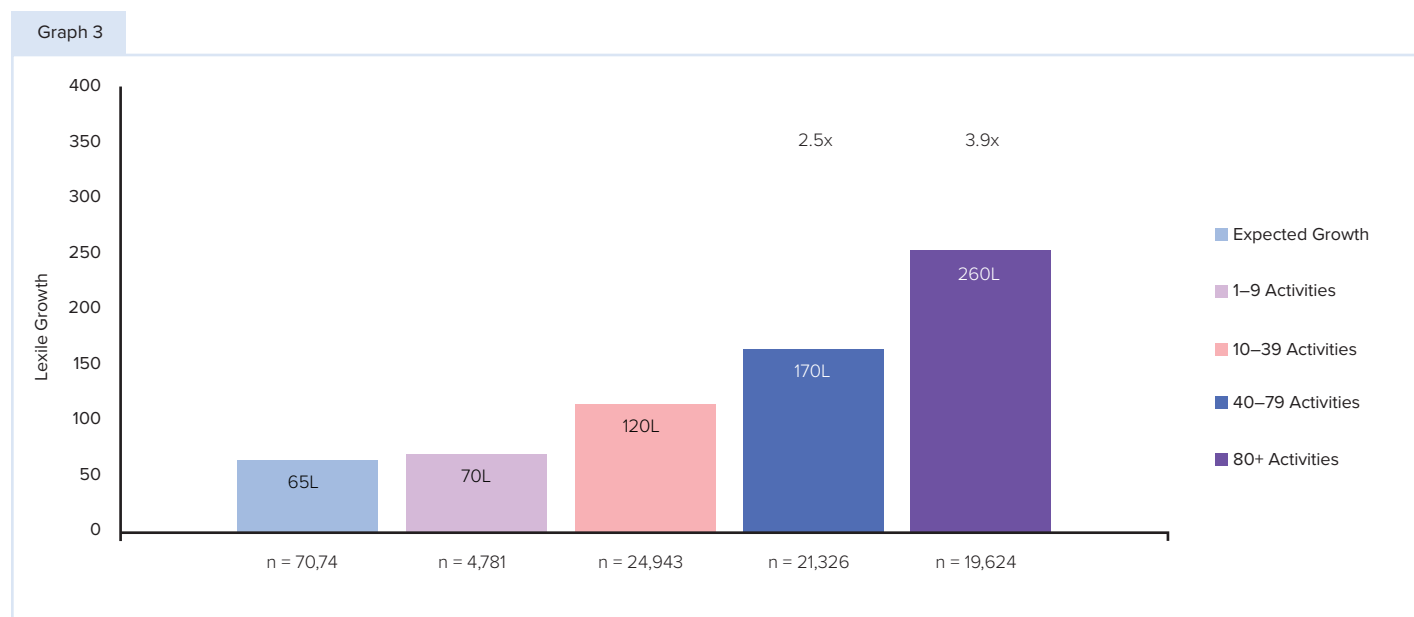


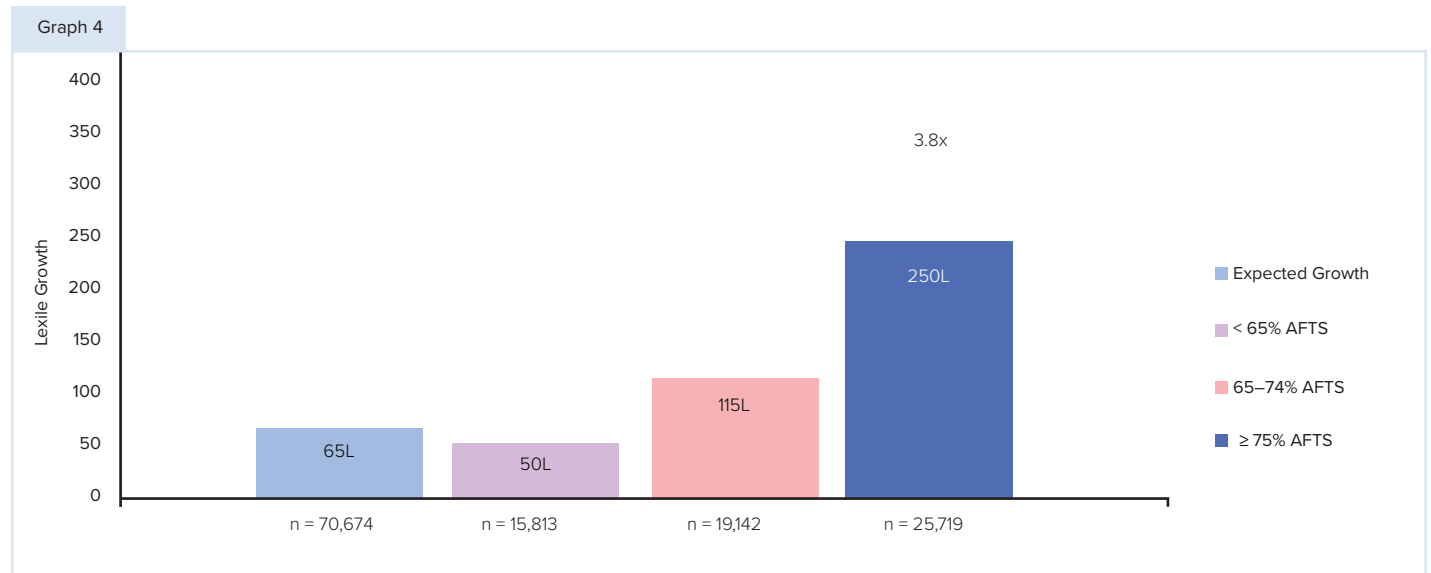
Table 3

Usage	Lexile Growth	Acceleration	n
Expected Growth	65	--	70,674
1-9 Activities	70	1.1	4,781
10-39 Activities	115	1.8	24,943
40-79 Activities	170	2.5	21,326
80+ Activities	255	3.9	19,624

Note: Expected growth (65L) was exceeded by students on track to complete 1-9 activities (70L), 10-39 activities (115L), 40-79 activities (170L), and 80+ activities (255L), and these differences were all statistically significant,  $t > 8.80$ ,  $p < .001$ .

## Students who performed with an AFTS of 75% or higher achieved 3.8 times their expected growth.

As shown in Graph 4, Lexile® growth increased as students' performance on the activities increased. Of note, even though the greatest acceleration occurred for students with an AFTS of 75% or greater, acceleration still occurred for students who approached this target AFTS (i.e., 65% to 75%).



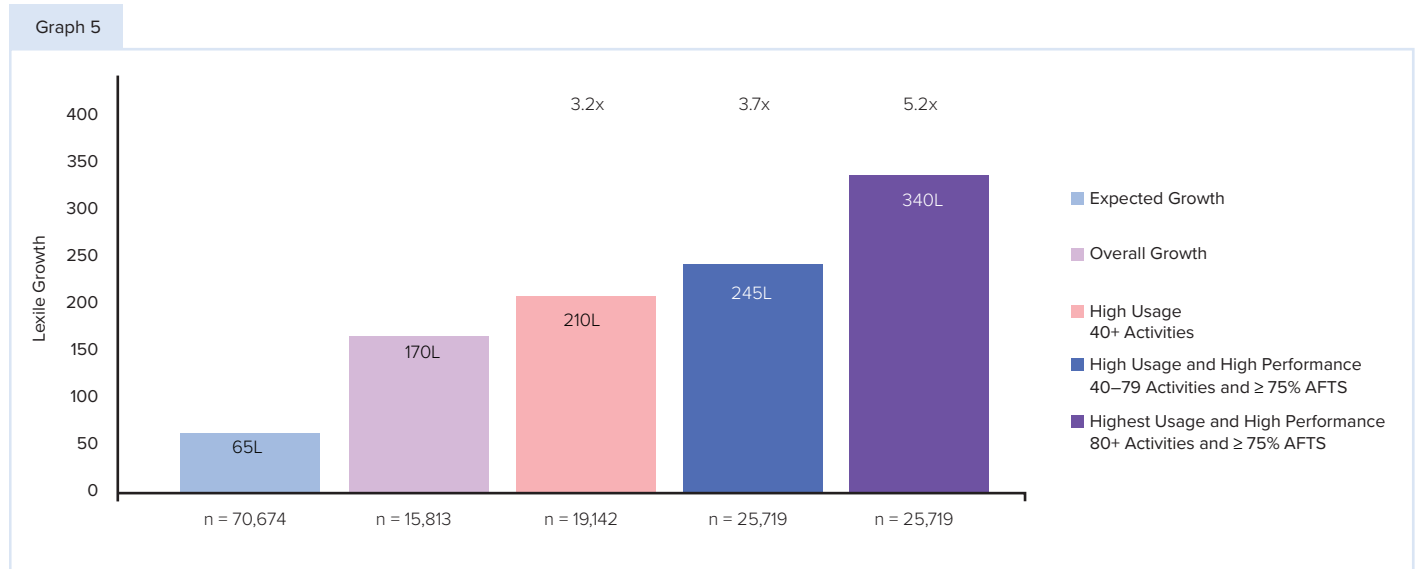
**Table 4**

Performance	Lexile Growth	Acceleration	n
Expected Growth	65	--	70,674
< 65% AFTS	50	0.8	15,813
65–74% AFTS	115	1.7	19,142
≥ 75% AFTS	250	3.8	35,719

Note: Expected growth (65L) exceeded the overall growth of students with < 65% AFTS (50L) but was exceeded by students with 65–75% AFTS (115L) and ≥ 75% AFTS (250L). These differences were all statistically significant,  $t > 29.29$ ,  $p < .001$ .

## Highly engaged students attained high levels of acceleration.

As shown in Graph 5, the reading growth of students with both high usage and high performance far exceeded expected growth, with rates of acceleration for the most engaged students at 5.2 times their expected growth. Lexile® growth was further examined to determine how students' usage and performance affects their literacy growth. Specifically, the high and highest usage categories defined below.



**Table 5**

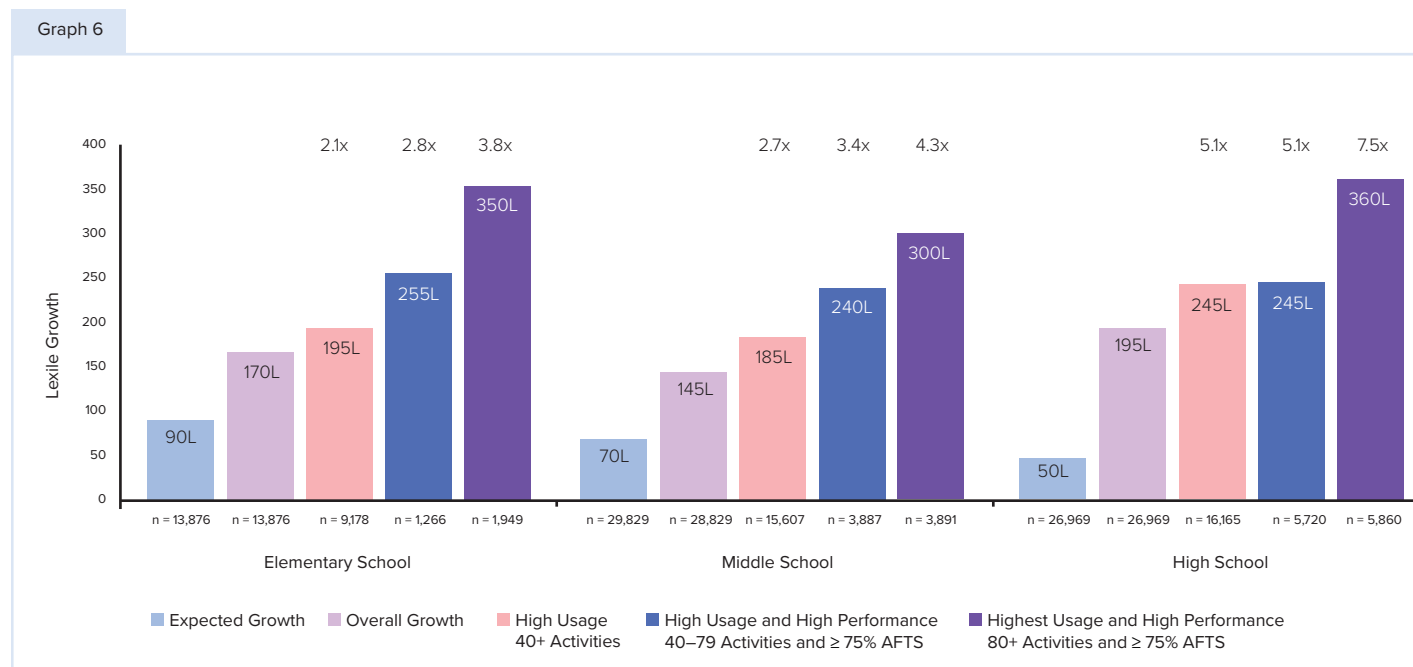
Usage and Performance	Lexile Growth	Acceleration	n
Expected Growth	65	--	70,674
Overall Growth	170	2.5	70,674
High Usage 40+ Activities	210	3.2	40,950
High Usage and High Performance 40-79 Activities and ≥ 75% AFTS	245	3.7	10,873
Highest Usage and Highest Performance 80+ Activities and ≥ 75% AFTS	340	5.2	11,700

Note: Expected growth (65L) was exceeded by students on track to complete 40+ activities (210L), 40-79 activities and ≥ 75% AFTS (245L), and 80+ activities and ≥ 75% AFTS (340L), with these differences all statistically significant,  $t > 221.61$ ,  $p < 0.001$ .

## Acceleration by School Level

### Engaged students attained acceleration at every school level.

As shown in Graph 6, acceleration increased in tandem with higher levels of usage and performance at each school level. Of note, students in the upper school levels demonstrated more reading growth than younger students despite having lower levels of expected growth.



**Table 6**

Usage and Performance	Lexile® Study			Acceleration			n		
	Elementary School	Middle School	Secondary School	Elementary School	Middle School	Secondary School	Elementary School	Middle School	Secondary School
Expected Growth	90	70	50	--	--	--	13,876	29,829	26,969
Overall Growth	170	145	195	1.8	2.1	4.0	13,876	29,829	26,969
High Usage 40+ Activities	195	185	245	2.1	2.7	5.1	9,178	15,607	16,165
High Usage and High Performance 40-79 Activities and ≥ 75% AFTS	255	240	245	2.8	3.4	5.1	1,266	3,887	5,720
Highest Usage and High Performance 80+ Activities and ≥ 75% AFTS	350	300	360	3.8	4.3	7.5	1,949	3,891	5,860

Note: At each school level, expected growth (ranging from 50L to 90L) was exceeded by students on track to complete 40+ activities (ranging from 185L to 245L), 40-79 activities and ≥ 75% AFTS (ranging from 240L to 255L), and 80+ activities and ≥ 75% AFTS (ranging from 300L to 360L), with these differences all statistically significant,  $t > 71.32$ ,  $p < 0.001$ .

## Acceleration in Private Language Schools

Highly engaged students at private language schools achieved 5.2 times expected growth.

As shown in Graph 7, in private language centers, overall growth exceeded expected growth the most for students with the highest levels of usage and performance.

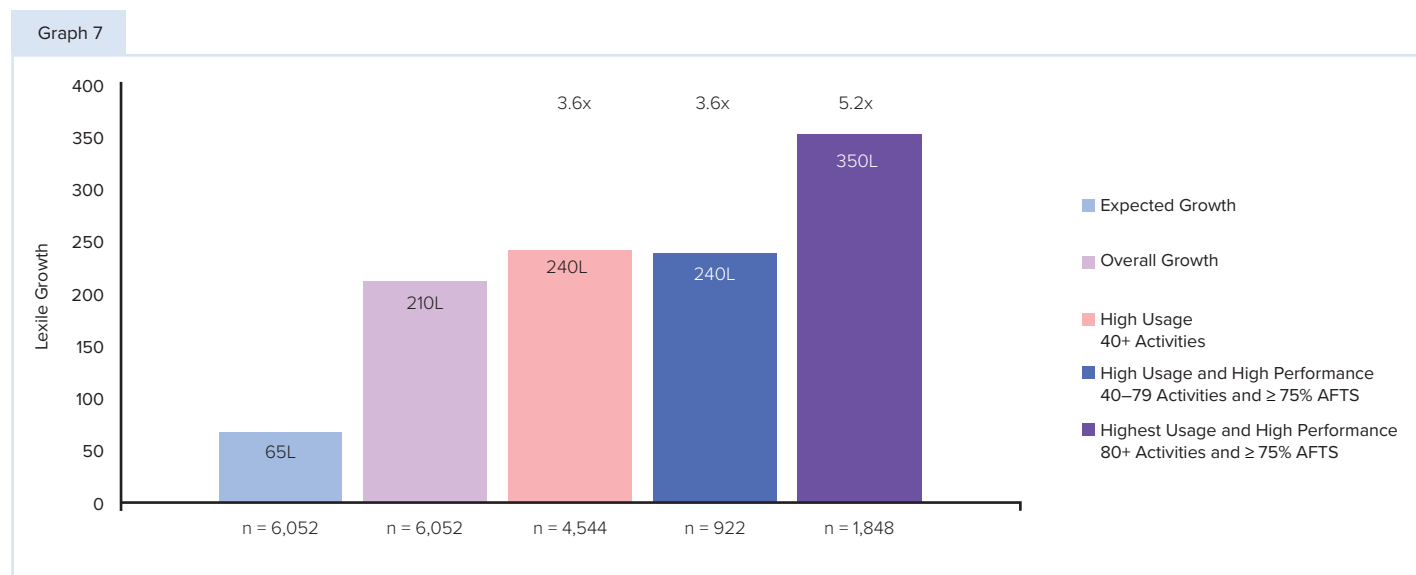


Table 7

Usage and Performance	Lexile® Growth	Acceleration	n
Expected Growth	65	--	6,052
Overall Growth	210	3.2	6,052
High Usage 40+ Activities	240	3.6	4,544
High Usage and High Performance 40–79 Activities and ≥ 75% AFTS	240	3.6	922
Highest Usage and High Performance 80+ Activities and ≥ 75% AFTS	350	5.2	1,848

Note: At private language centers, expected growth (65L) was exceeded by students on track to complete 40+ activities (240L), 40–79 activities and ≥ 75% AFTS (240L), and 80+ activities and ≥ 75% AFTS (350L), with these differences all statistically significant,  $t > 74.59$ ,  $p < 0.001$ .

## Acceleration in Universities

### Highly engaged students at universities achieved 5.8 times expected growth.

As shown in Graph 8, in universities, overall growth exceeded expected growth the most for students with the highest levels of usage and performance.

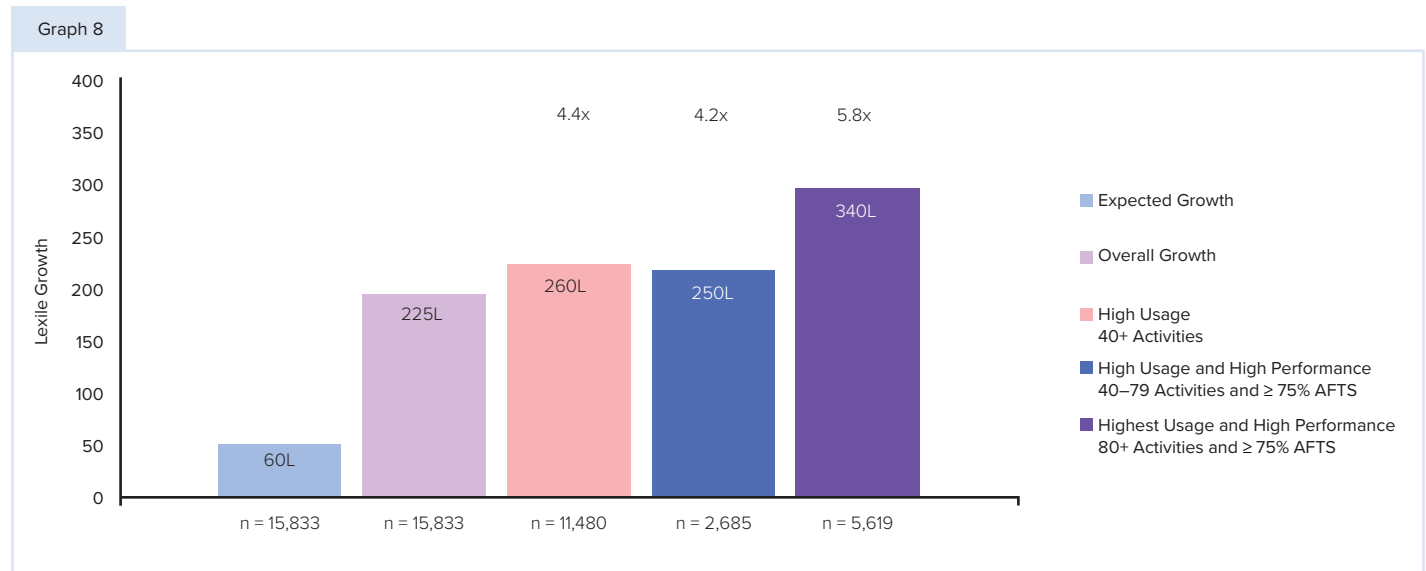


Table 8

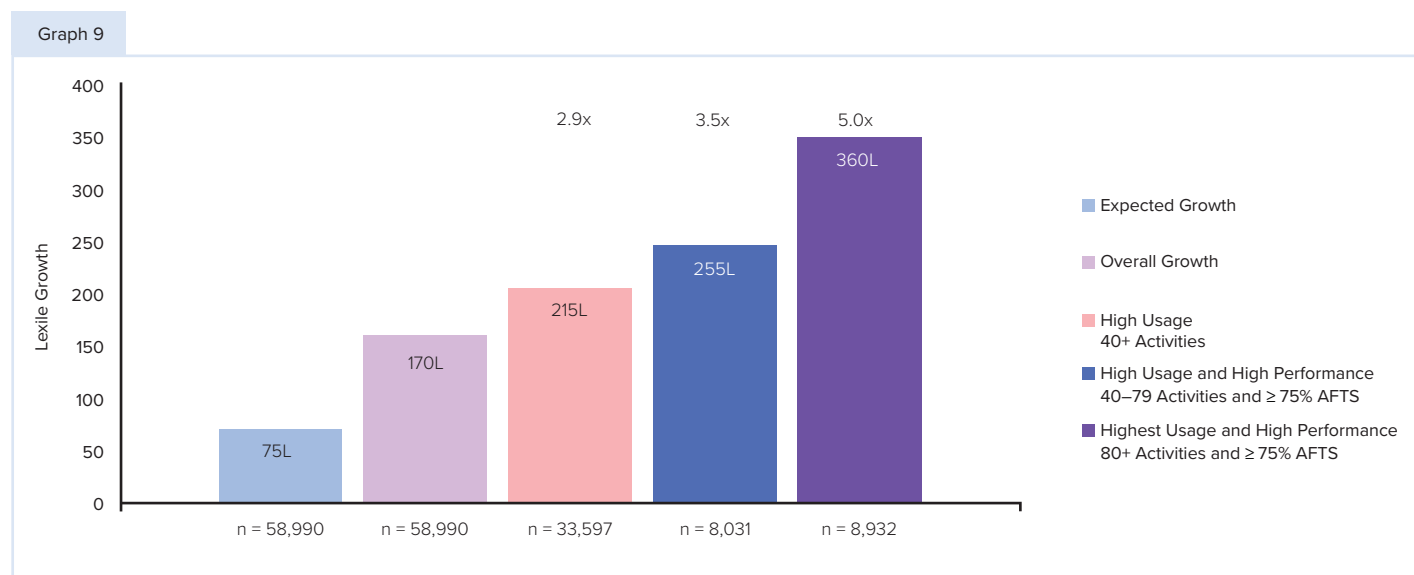
Usage and Performance	Lexile® Growth	Acceleration	n
Expected Growth	60	--	15,833
Overall Growth	225	3.8	15,833
High Usage 40+ Activities	260	4.4	11,480
High Usage and High Performance 40–79 Activities and ≥ 75% AFTS	250	4.2	2,685
High Usage and High Performance 80+ Activities and ≥ 75% AFTS	340	5.8	5,619

Note: At universities, expected growth (60L) was exceeded by students on track to complete 40+ activities (260L), 40–79 activities and ≥ 75% AFTS (250L), and 80+ activities and ≥ 75% AFTS (340L), with these differences all statistically significant,  $t > 140.32$ ,  $p < 0.001$ .

## Acceleration in Below-Grade-Level Readers

### Highly engaged, below-grade-level readers achieved five times expected growth.

Students were designated as below-grade-level readers based on the U.S. national fall percentile corresponding to their pretest LevelSet Lexile® measures. For the purposes of this analysis, below-grade-level readers were defined as performing at or below the 35th percentile. In the analytic sample, 95% fell below the 35th percentile. As shown in Graph 9, even for below-grade-level readers, overall growth exceeded expected growth the most for students with the highest levels of usage and performance.



**Table 9**

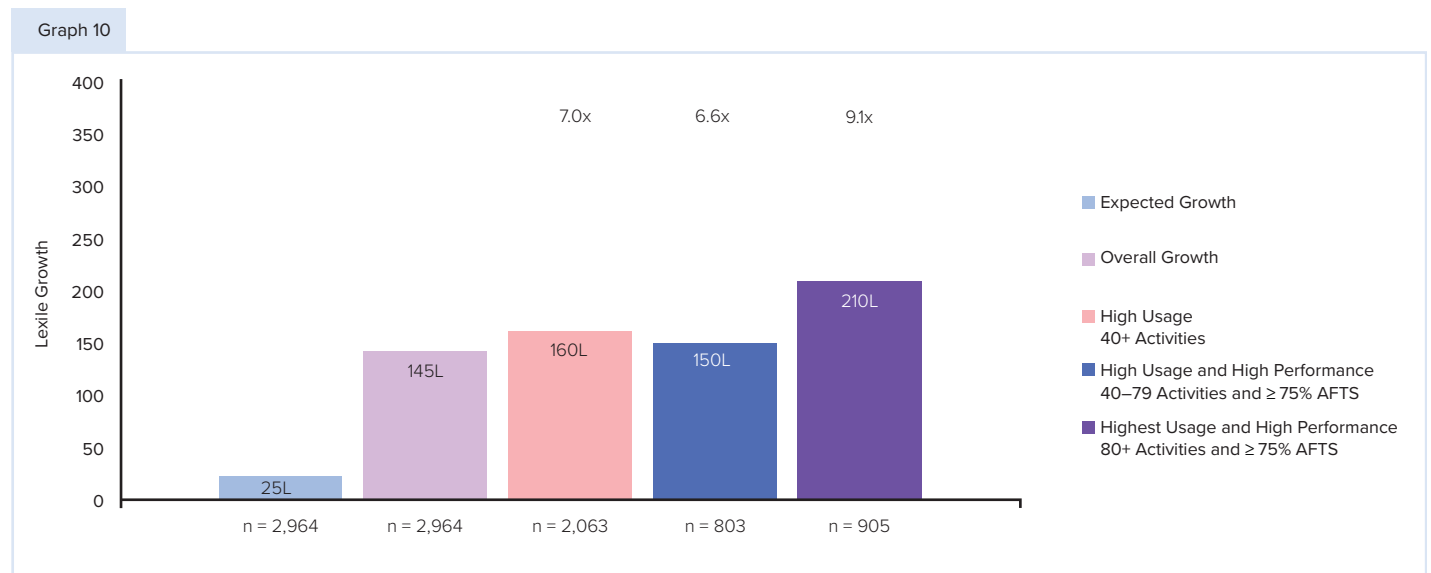
Usage and Performance	Lexile Growth	Acceleration	n
Expected Growth	75	--	58,990
Overall Growth	170	2.3	58,990
High Usage 40+ Activities	215	2.9	33,597
High Usage and High Performance 40–79 Activities and ≥ 75% AFTS	255	3.5	8,031
Highest Usage and High Performance 80+ Activities and ≥ 75% AFTS	360	5.0	8,932

Note: For below-grade-level readers, expected growth (75L) was exceeded by students on track to complete 40+ activities (215L), 40–79 activities and ≥ 75% AFTS (255L), and 80+ activities and ≥ 75% AFTS (360L), with these differences all statistically significant,  $t > 192.53$ ,  $p < 0.001$ .

## Acceleration in Advanced Readers

### Highly engaged, advanced readers achieved 9.1 times expected growth.

Students were designated as advanced readers based on the U.S. national percentiles corresponding to their pretest LevelSet Lexile® measures. For the purposes of this analysis, advanced readers were defined as performing at the 75th percentile or above. In the analytic sample, 5% were performing at or above the 75th percentile. As shown in Graph 10, among advanced readers, overall growth exceeded expected growth the most for students with the highest levels of usage and performance.



**Table 10**

Usage and Performance	Lexile Growth	Acceleration	n
Expected Growth	25	--	2,964
Overall Growth	145	6.2	2,964
High Usage 40+ Activities	160	7.0	2,063
High Usage and High Performance 40–79 Activities and ≥ 75% AFTS	150	6.6	803
Highest Usage and High Performance 80+ Activities and ≥ 75% AFTS	210	9.1	905

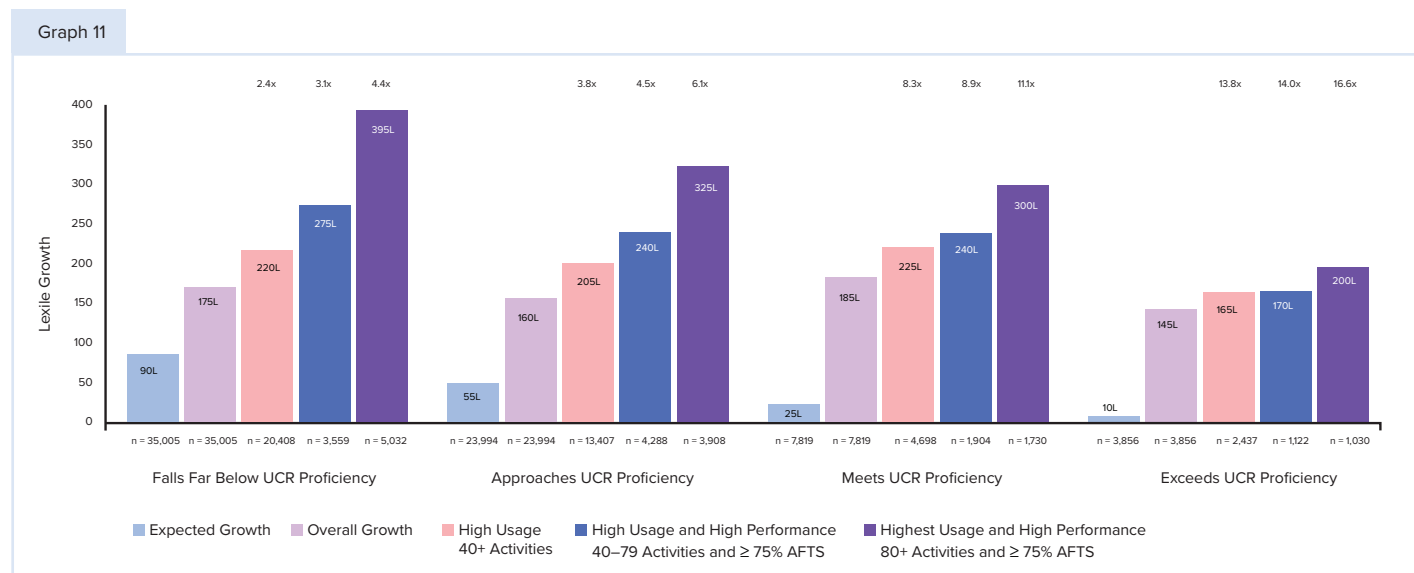
Note: For advanced readers, expected growth (25L) was exceeded by students on track to complete 40+ activities (160L), 40–79 activities and ≥ 75% AFTS (150L), and 80+ activities and ≥ 75% AFTS (210L), with these differences all statistically significant,  $t > 54.51$ ,  $p < 0.001$ .



# Acceleration by University and Career Readiness Levels

Engaged students attained acceleration at every university and career-readiness level.

Students were designated as either “falls far below,” “approaches,” “meets,” or “exceeds” university and career readiness (UCR) based on their grade level and beginning-of-year Lexile®. As shown in Graph 11, acceleration increased at higher levels of usage and performance at each readiness level.



**Table 11**

Lexile Study					Acceleration				n			
Usage	Falls Far Below UCR Proficiency	Approaches UCR Proficiency	Meets UCR Proficiency	Exceeds UCR Proficiency	Falls Far Below UCR Proficiency	Approaches UCR Proficiency	Meets UCR Proficiency	Exceeds UCR Proficiency	Falls Far Below UCR Proficiency	Approaches UCR Proficiency	Meets UCR Proficiency	Exceeds UCR Proficiency
Expected Growth	90	55	25	10	--	--	--	--	35,005	23,994	7,819	3,856
Overall Growth	175	160	185	145	1.9	3.0	6.9	12.1	35,005	23,994	7,819	3,856
High Usage 40+ Activities	220	205	225	165	2.4	3.8	8.3	13.8	20,408	13,407	4,698	2,437
High Usage and High Performance 40–79 Activities and ≥ 75% AFTS	275	240	240	170	3.1	4.5	8.9	14.0	3,559	4,288	1,904	1,122
High Usage and High Performance 80+ Activities and ≥ 75% AFTS	395	325	300	200	4.4	6.1	11.1	16.6	5,032	3,908	1,730	1,030

Note: At each university and career readiness level, expected growth (ranging from 10L to 90L) was exceeded by students on track to complete 40+ activities (ranging from 165L to 225L), 40–79 activities and ≥ 75% AFTS (ranging from 170L to 275L), and 80+ activities and ≥ 75% AFTS (ranging from 200L to 395L), with these differences all statistically significant, > 75.89, p < 0.001.

## University and Career Readiness

### How university and career readiness is measured in *Achieve3000 Literacy*™.

It's useful to think of university and career readiness as a journey. Since expectations have shifted toward a more rigorous outcome, it is critical to understand that, for many students, it will take two or three years to reach university and career readiness reading levels. Because we know a student's expected growth, and we know the approximate Lexile® measure students need to attain to be prepared for the reading demands of the workforce and university coursework, we can make a prediction about whether or not a student is or isn't "on track" to reach 1300L by the end of their school career, depending on their grade level and current Lexile measure. Students who are in the two "not on track" categories are not meeting the university and career readiness targets for their grade level and are not expected to reach the 1300L level by the end of secondary school without significant intervention and acceleration. Students in the two "on track" categories are meeting grade-level targets and can be expected to read at or above 1300L by the time they graduate as long as they continue to achieve expected or greater growth every year.

Table 12

UNIVERSITY AND CAREER READINESS PROFICIENCY RANGES				
Not On Track			On Track	
Grade	Falls Far Below	Approaches	Meets	Exceeds
1	BR115 and Below	BR110–185L	190L–530L	535L and Above
2	150L and Below	155L–415L	420L–650L	665L and Above
3	265L and Below	270L–515L	520L–820L	825L and Above
4	385L and Below	390L–735L	740L–940L	945L and Above
5	500L and Below	505L–825L	830L–1010L	1015L and Above
6	555L and Below	560L–920L	925L–1070L	1075L and Above
7	625L and Below	630L–956L	970L–1120L	1125L and Above
8	660L and Below	665L–1005L	1010L–1185L	1190 and Above
9	775L and Below	780L–1045L	1050L–1260L	1265L and Above
10	830L and Below	835L–1075L	1080L–1335L	1340L and Above
11–12	950L and Below	955L–1180L	1185L–1385L	1390L and Above

## Year over year, more students reached grade-level reading expectations for university and careers.

To evaluate growth in university and career readiness, students’ initial UCR was based on their pretest LevelSet, whereas their end-of-year UCR was based on their post-test LevelSet or last monthly Lexile® adjustment. As shown in Graph 12, the percentage of students who were on track increased from fall to spring from 16.5% to 34.1% (reflecting a 106% increase, with an additional 12,403 more students being on track by the end of the year). Graph 13 shows the movement across the four UCR levels.

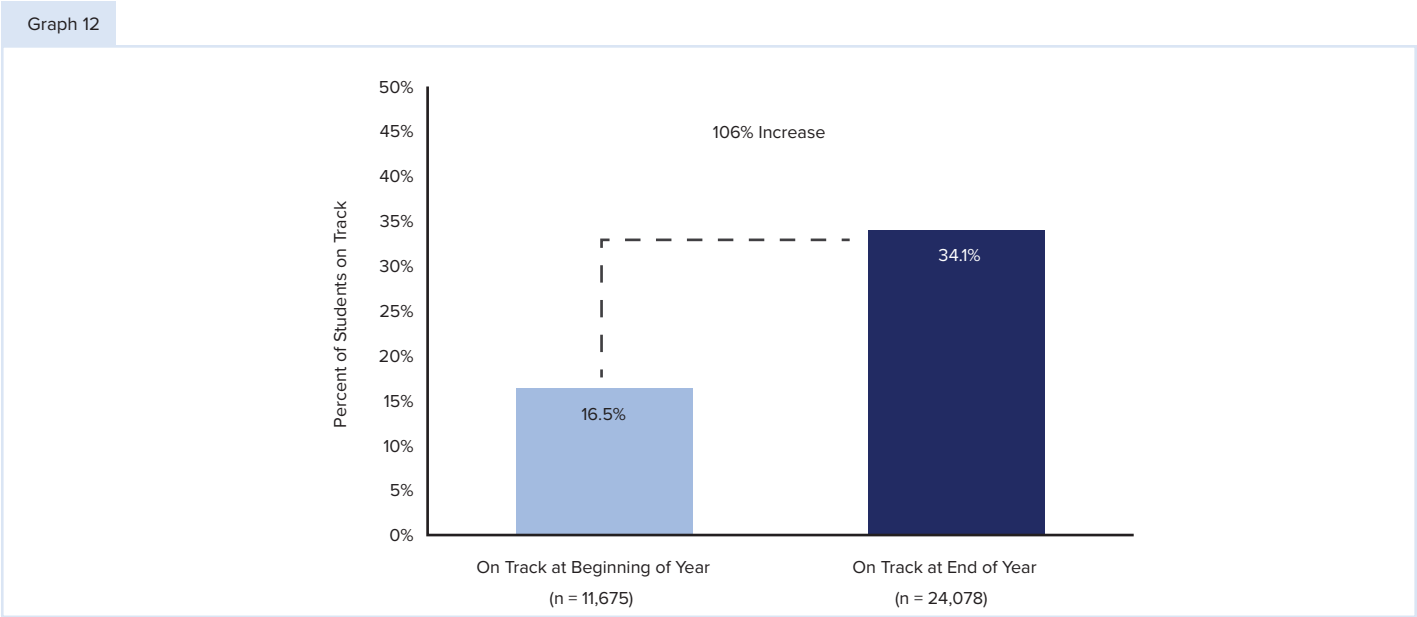


Table 13

Percent of Students On Track	%	n
On Track at Beginning of Year	16.5%	11,675
On Track at End of Year	34.1%	24,078

Graph 13

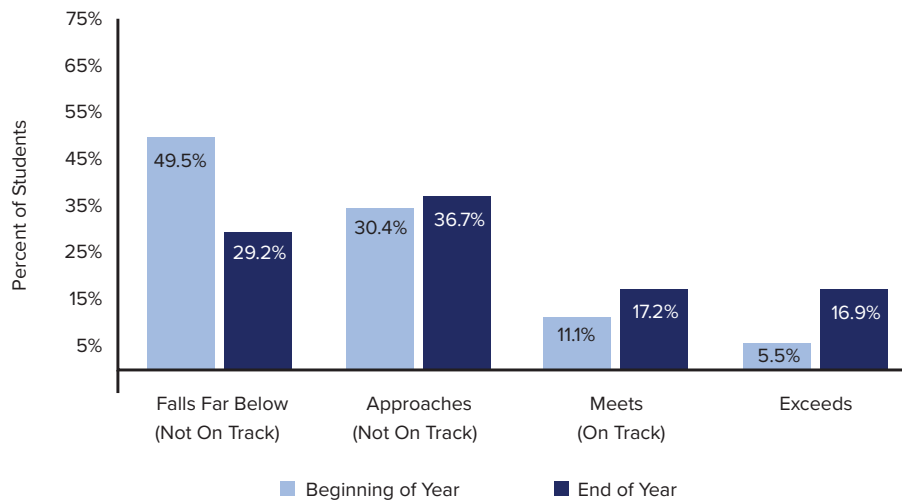


Table 14

Percent of Students	Falls Far Below (Not On Track)	Approaches (Not On Track)	Meets (On Track)	Exceeds (On Track)
Beginning of Year	49.5%	34.0%	11.1%	5.5%
End of Year	29.2%	36.7%	17.2%	16.9%

## Conclusion and Recommendations

The 2020–2021 International Lexile Study demonstrated, as previous International Lexile® Studies have done, that *Achieve3000 Literacy*™ is an effective way to accelerate learning growth across grade levels and learning profiles, including below-grade-level readers, students learning English as an additional language, and advanced readers. In spite of the potential impact of COVID-19 during the 2020–2021 school year, the results are consistent with the reports from previous school years in that students at every level achieved higher than expected Lexile growth. Additional takeaways include:

- Culturally relevant content is an effective way to inspire, engage, and motivate diverse learners. The need for content and instruction that is reflective and inclusive of students from different backgrounds is an essential aspect of providing equitable access to education for all. This study showed that many students were not engaged during the pandemic. Re-engaging them will be the key to ensuring that they can make up for unfinished learning. Culturally relevant content can help re-engage students.
- Technology-enabled instruction allows all students to learn at their own pace and in their own way. Based on the analyses of students' usage, performance, and growth, it's clear that the pandemic

and the sudden shift to remote instruction allowed students the flexibility to learn in ways that worked best for them. Going forward, students will benefit greatly if schools and districts can continue to provide them with personalized and adaptive learning opportunities.

- Providing tools to accelerate growth will be essential in helping to address unfinished learning. Many studies have shown that students are likely to come back to school with some degree of unfinished learning. Differentiated instructional solutions like Achieve3000 Literacy™ can help students catch up and get on track for success after graduation.

## References

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